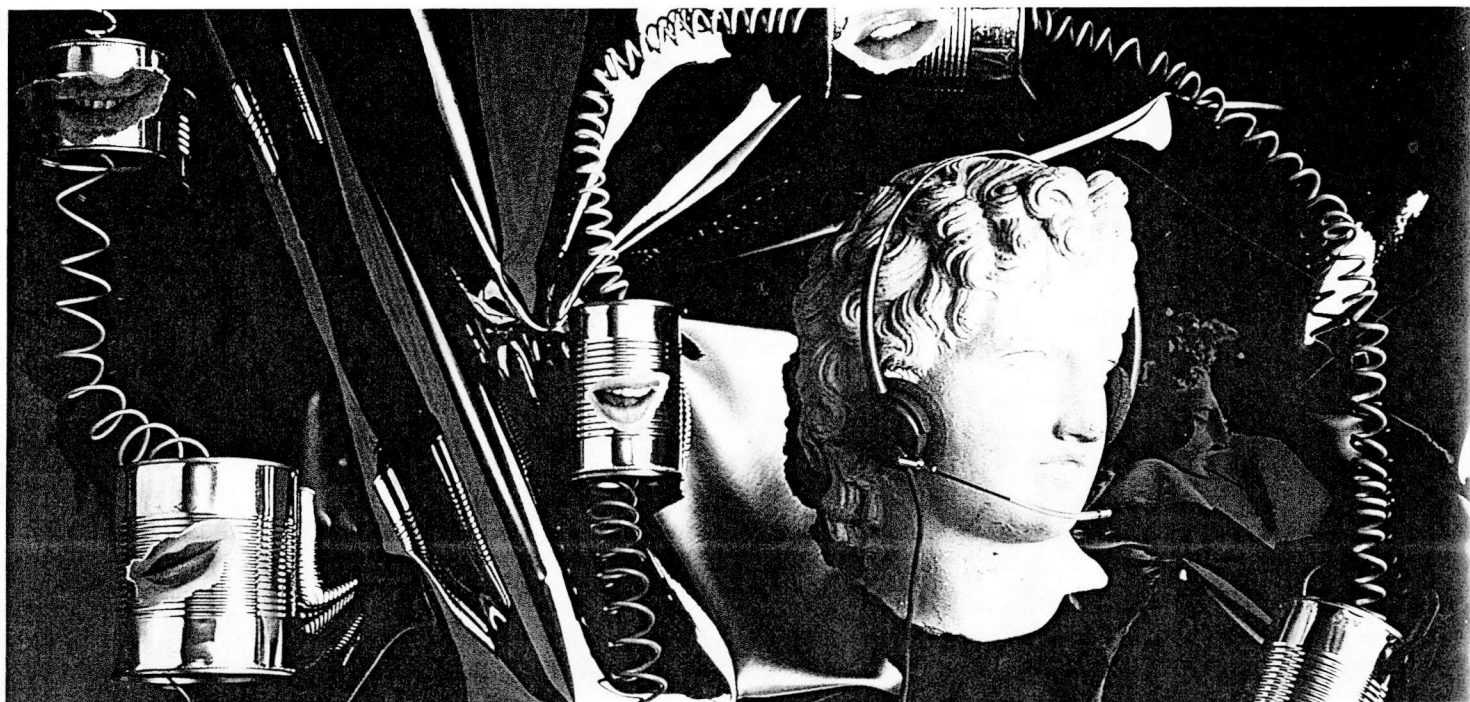
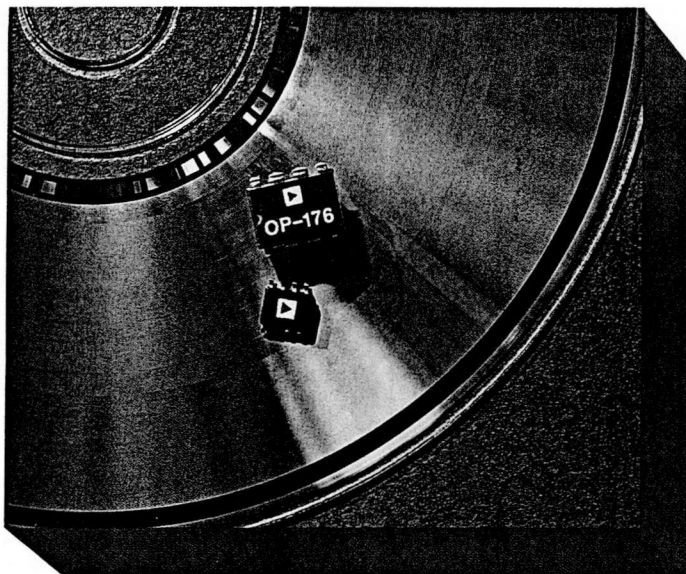




NEW AUDIO SIGNAL PROCESSING INTEGRATED CIRCUITS



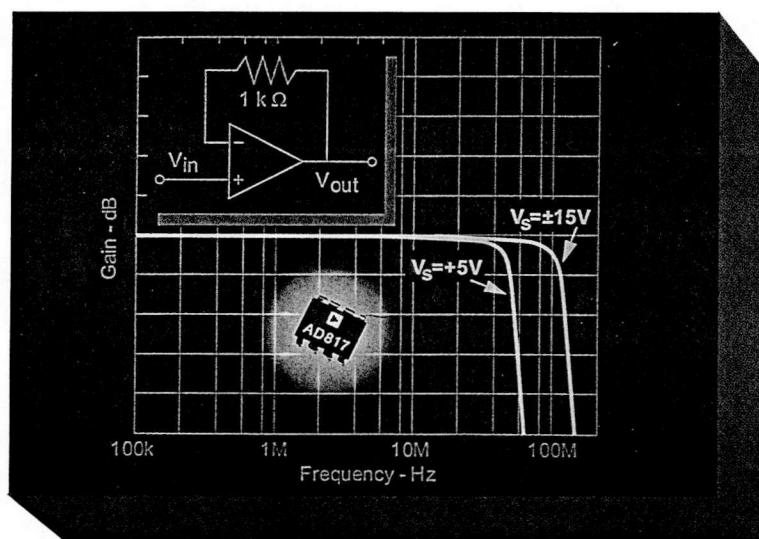
 **ANALOG
DEVICES**



OP176 Bipolar/JFET Op Amp

Sonically superior single op amp combines best aspects of bipolar and JFET designs

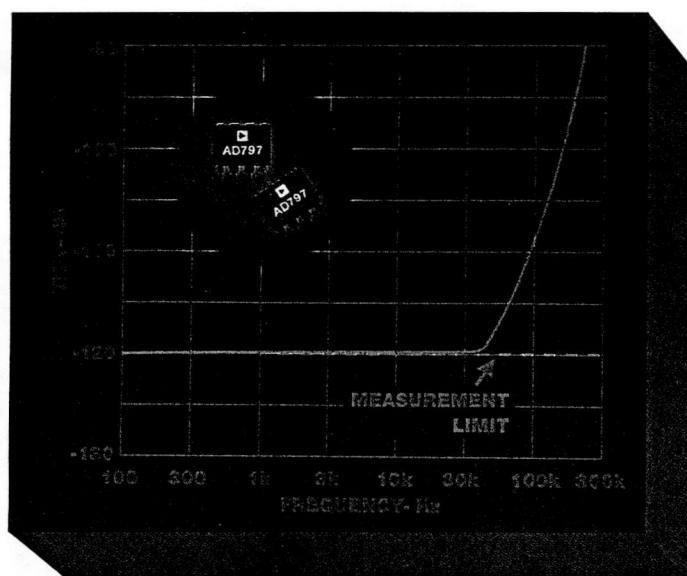
- Excellent Sonic Characteristics
- $5.7 \text{ nV}/\sqrt{\text{Hz}}$ Voltage Noise
- 50 mA Output Drive Current
- Output Short Circuit Protected
- Drives $10 \text{ V}_{\text{RMS}}$ into 600Ω
- 8-Pin SOIC and P-DIP Packages
- Upgrades NE5534



AD817/818 Low-Cost, Low-Power Op Amps

Tailored for high-speed audio equipment needing flat frequency response

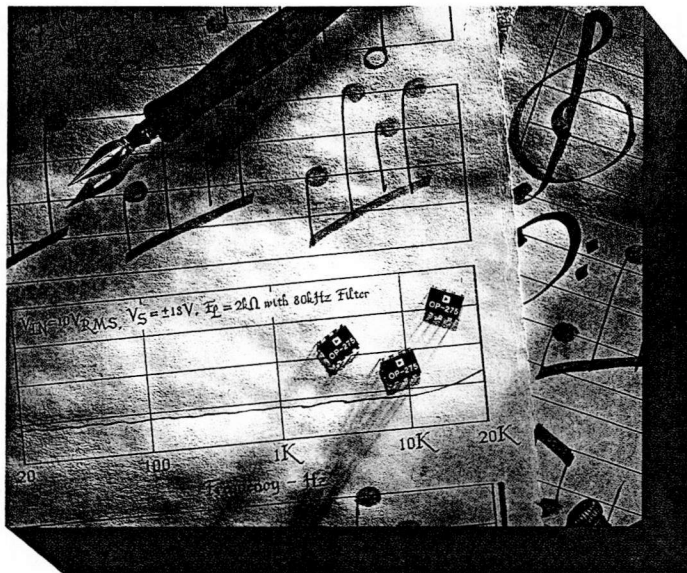
- Very High Speed
 - AD818: 130 MHz BW ($G \geq +2$)
 - AD817: 50 MHz BW ($G = +1$)
- Low Power: 7.5 mA Max
- Excellent Differential Gain and Phase
 - AD818: DG = 0.005%, DP = 0.045°
 - AD817: DG = 0.04%, DP = 0.08°
- High Output Drive Capability: $>50 \text{ mA}$
- Unlimited Capacitive Load Drive (AD817)
- Low Voltage Noise: $10 \text{ nV}/\sqrt{\text{Hz}}$ (AD818)
- Specified for Single (+5 V) and Dual ($\pm 5 \text{ V}$, $\pm 15 \text{ V}$) Power Supplies
- Duals (AD826, AD828) Also Available



AD797 Ultralow-Noise, Low-Distortion Op Amp

Industry's best combination of low-noise and low-distortion performance

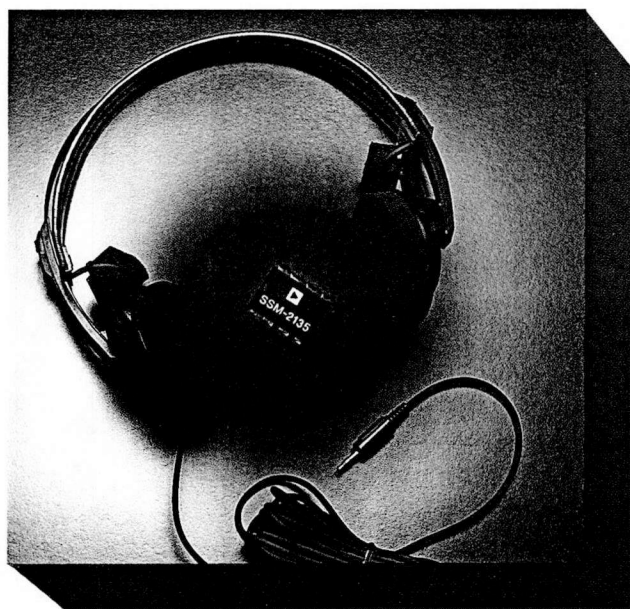
- Industry's Best Combination of Low Noise and Low Distortion
- Lowest Distortion
 - THD: 0.0001% (20 kHz, 3 V rms)
 - THD: 0.001% (250 kHz, 3 V rms)
- Ultralow Noise
 - V_n : $0.9 \text{ nV}/\sqrt{\text{Hz}}$
 - I_n : $2.0 \text{ pA}/\sqrt{\text{Hz}}$ @ 1 kHz
- Low Input Offset Voltage
 - Initial Offset: 40 μV Max
 - Offset Drift: $0.6 \mu\text{V}/^\circ\text{C}$ Max
- Fast Slew Rate: 20 V/ μs



OP275 **Dual, Bipolar/JFET, "Butler" Op Amp**

Sonically superior dual op amp combines best aspects of bipolar and JFET designs

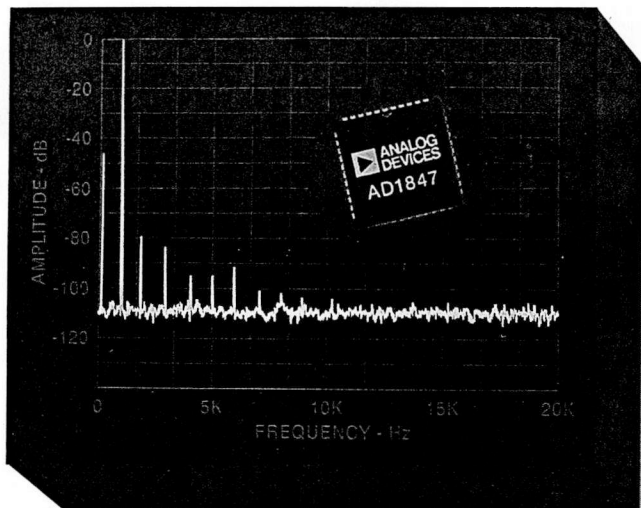
- Unique, Patented Bipolar/JFET, "Butler" Input
- Excellent Sonic Characteristics
 - e_n : 6 nV/√Hz
 - THD+N: 0.0006%
- Good Dynamic Characteristics
 - BW: 9 MHz
 - SR: 22 V/μs
- Only 5 mA Supply Current for Both Amps
- Low-Cost, Low-Power Upgrade for NE5532
- Available in SO-8 Package.



SSM2135 **Stereo, Single-Supply Op Amp**

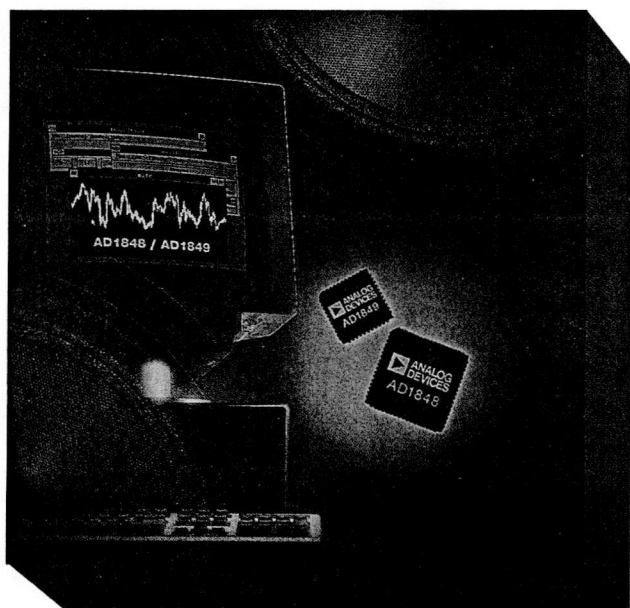
Ideal codec companion for mic preamp and headphone drive applications

- 5.2 nV/√Hz Voltage Noise @ 1 kHz
- Low-Distortion, High-Current Output
 - THD+N: 0.003% @ 32 Ω
- Wide Output Swing: >4 V p-p @ $V_S = +5$ V
- 3.5 MHz Bandwidth
- Unity-Gain Stable



AD1847
Low-Cost, Serial-Port, 16-Bit, SoundPort® Codec

- Low-Cost, Single-Chip, Integrated $\Sigma\Delta$ Digital Audio Stereo Codec
- Supports the Microsoft Windows Sound System®
- Two-Line and Two-Aux Inputs; Single-Line Output
- 70 dB Min Dynamic Range
- Serial Interface Compatible with DSP Chip Serial Ports
- Support for Multiple Codec Systems
- 44-Lead PLCC and TQFP Packages



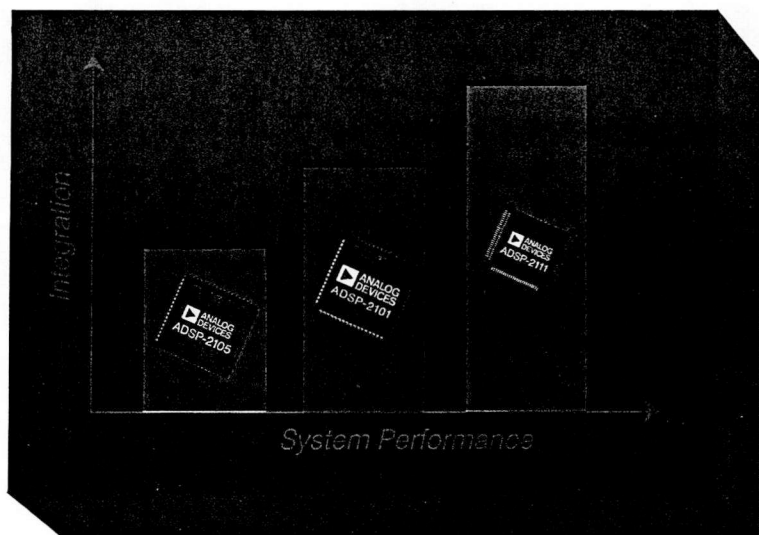
AD1848K
Parallel-Port, 16-Bit, SoundPort® Codec

- Single-Chip, Integrated $\Sigma\Delta$ Digital Audio Stereo Codec
- Supports the Microsoft Windows Sound System®
- Line, Mic and Two-Aux Inputs; Single-Line Output
- 80 dB Min Dynamic Range
- Byte-Wide Parallel Interface to ISA and EISA Buses
- Operation from +5 V or Mixed 5 V/3.3 V Supplies
- 68-Lead PLCC and 64-Lead TQFP Packages



AD1849K
Serial-Port, 16-Bit, SoundPort® Codec

- Single-Chip Integrated $\Sigma\Delta$ Digital Audio Stereo Codec
- Line and Mic Inputs; Line, Headphone and Speaker Outputs
- 80 dB Min Dynamic Range
- Serial Interface Compatible with DSP Chip Serial Ports
- Support for Multiple Codec Systems
- 44-Lead PLCC Package
- Pin-Compatible with the CS4215



ADSP-2105 **Low-Cost, Fixed-Point DSP Microcomputer**

An economical entry point to DSP for under \$10 in OEM quantities

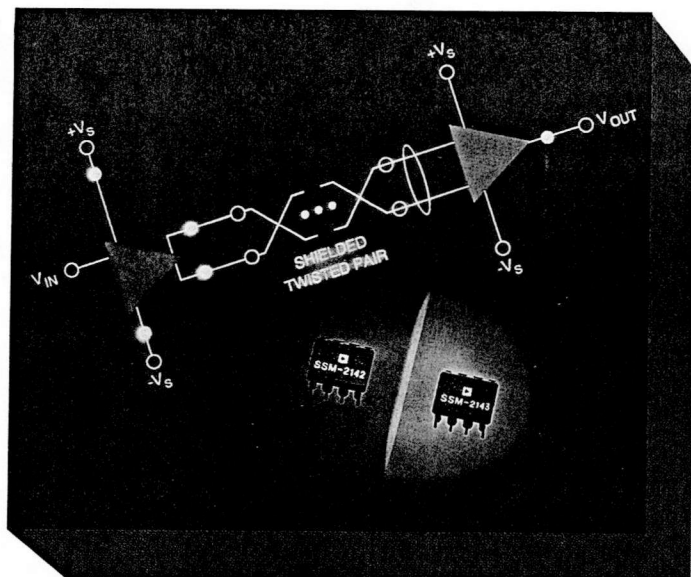
- 100 ns Instruction Cycle Time from 10 MHz Crystal
- 1024-Point Complex FFT in 3.46 ms
- 1 K x 24 Words On-Chip Program RAM
- 0.5 K x 16 Words On-Chip Data RAM
- High-Speed Serial Port with DMA
- 68-Lead PLCC
- ADSP-2100 Family Code- and Function-Compatible
- ADSP-2101 and ADSP-2115 Pin-Compatible



ADSP-2115 **High-Performance, Low-Cost DSP** **Microcomputer**

For demanding DSP applications needing additional functionality and two high-speed serial ports

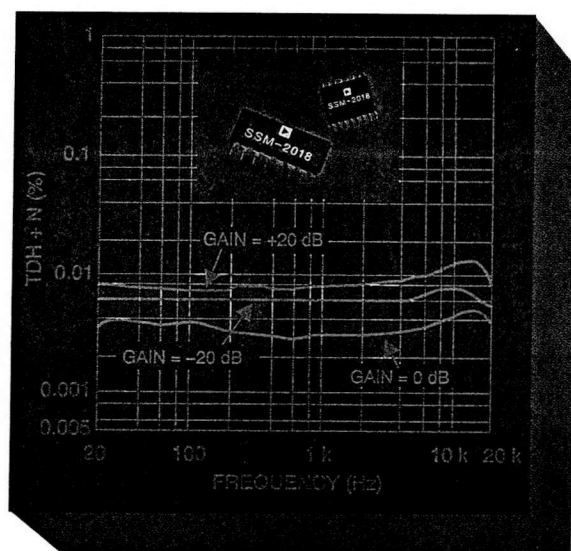
- 60 ns Instruction Cycle Time from 16.67 MHz Crystal
- 1024-Point Complex FFT in 2.07 ms
- 1 K x 24 Words On-Chip Program RAM
- 0.5 K x 16 Words On-Chip Data RAM
- Two High-Speed Serial Ports with DMA
- 68-Lead PLCC and 80-Lead PQFP
- ADSP-2100 Family Code- and Function-Compatible
- ADSP-2101 and ADSP-2105 Pin-Compatible



SSM2141/2142/2143 Audio Line Driver Receivers

Compact, high-performance audio line drive/receive chip set

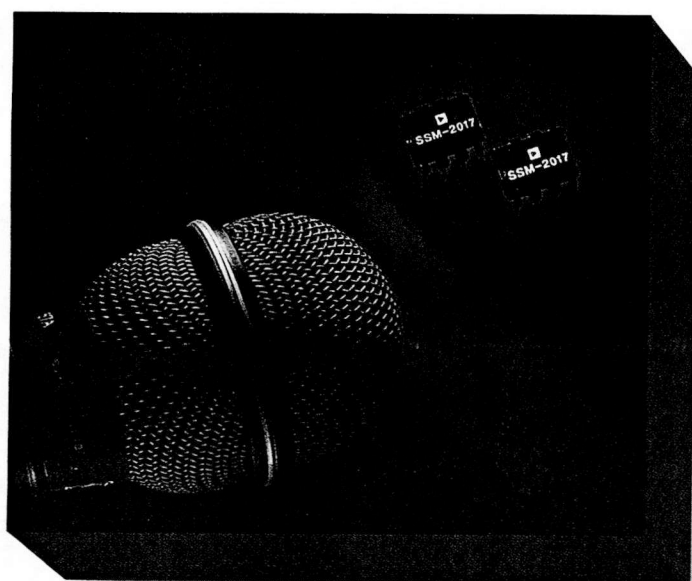
- SSM2141: Differential Line Receiver
CMRR: 100 dB @ 60 Hz
THD + N: 0.001% (20 Hz to 20 kHz)
- SSM2142: Balanced Line Driver
Drives +24 dBu 600 Ω Loads
THD + N: 0.006% (20 Hz to 20 kHz)
- SSM2143: -6 dB Differential Line Receiver
Handles +28 dBu Signals
THD + N: 0.002% (20 Hz to 20 kHz)



SSM2018 Premium Voltage-Controlled Amplifier

Transparent, premium, single-channel VCA

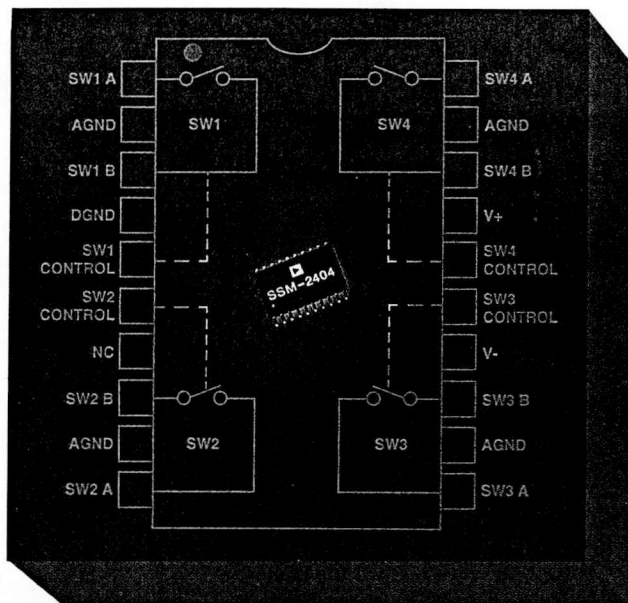
- -95 dBu Noise (Class AB)
- +22 dBu Headroom
- Unprecedented Class AB THD + N = 0.007% @ 1 kHz, $G = \pm 20$ dB
- 10 V/ μ s Slew Rate
- 12 MHz Bandwidth
- 140 dB Gain Range
- No External Op Amps Required



SSM2017 Self-Contained Audio Preamplifier

Ultralow noise at ultralow cost in compact 8-pin package

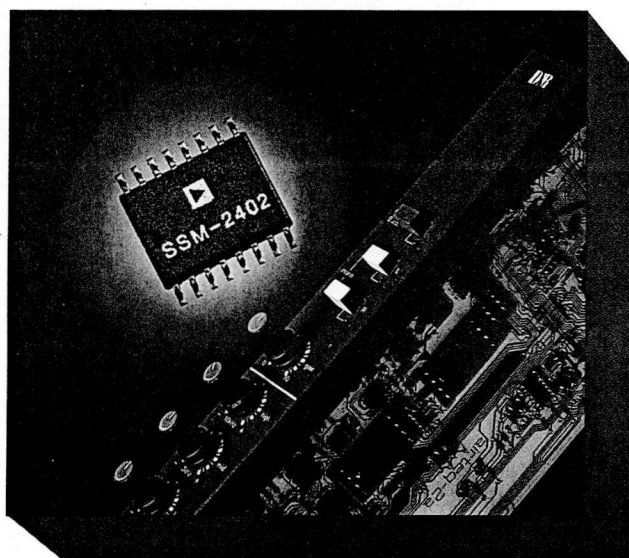
- e_n : 950 pV/ $\sqrt{\text{Hz}}$
- THD + N: <0.01% ($G=100$, 20 Hz to 20 kHz)
- Excellent Dynamic Specifications
SR: 17 V/ μ s
BW: 1 MHz ($G=100$)
- CMRR: 92 dB ($G=100$)
- Gain Range of 1 to 2000
- ± 6 V to ± 22 V Supply Range



SSM2404 **"Clickless" Quad Audio Switch**

Quality audio switching without sonic artifacts

- 0.0008% THD + N @ 1 kHz, $R_L = 100\text{ k}\Omega$
- -100 dB OFF Isolation ($R_L = 10\text{ k}\Omega$ @ 1 kHz)
- -94 dB Crosstalk ($R_L = 10\text{ k}\Omega$ @ 1 kHz)
- 28 Ω ON Resistance
- Guaranteed Break-Before-Make Operation
- Single- or Dual-Supply Operation
- Low Cost-Per-Switch



SSM2402 **"Clickless" Dual Audio Switch**

Quality audio switching without sonic artifacts

- 0.003% THD+N @ 20 kHz BW, $R_L = 5\text{ k}\Omega$
- -120 dB OFF Isolation @ 20 kHz
- -96 dB Crosstalk @ 20 kHz
- Handles +24 dBu Signals (@ $V_S = \pm 20\text{ V}$)
- Guaranteed Break-Before-Make Operation



SSM2125A/2126A **DOLBY® Pro-Logic Surround Matrix Decoders**

Critically-acknowledged best sounding Pro Logic decoder

- High-Performance, Highly Integrated System
- Auto-Balance and Noise Generator On-Chip
- 103 dB Dynamic Range
- 0.02% THD + N @ 1 kHz
- 40 dB Typical Channel Separation

